Atty. Dkt. No. 041673-2054

The amendments presented below are in compliance with the revised amendment format permitted in the Notice from the Office of Patent Legal Administration of the U.S. Patent and Trademark Office dated February 10, 2003, and published at 1267 OG 106 on February 25, 2003. Thus, the provisions of 37 CFR 1.121(a), (b), (c) and (d) are waived for any amendments made in this application to the claims, specification, and drawings.

Amendments to the Abstract are presented as a new Abstract attached to this document for insertion after the claim pages of the application (or to replace the previously submitted Abstract).

Amendments to the Claims begin below, on this page of this document.

Amendments to the Specification begin on page 5 of this document.

Remarks/Arguments begin on page 5 of this document.

Please amend the application as follows:

Amendments to the Claims:

1. (Currently Amended) A method for delivery of a therapeutic neurotrophin to targeted defective, diseased or damaged neurons in the mammalian brain, the method comprising directly delivering a neurotrophic composition, comprising a neurotrophin encoding ~~lentiviral~~ expression vector, into one or more delivery sites within a region of the brain containing targeted neurons; wherein the neurotrophin is expressed in, or within proximity to ~~500 μm from~~, a targeted cell; ~~and no more than about 10 mm from another delivery site~~; and wherein further contact with the neurotrophin ameliorates the defect, disease or damage.

2. The method according to Claim 1, wherein the region of the brain containing the targeted neurons is the substantia nigra.

3. The method according to Claim 2, wherein the targeted neurons are dopaminergic neurons.

4. (Currently Amended) The method according to Claim 1, wherein the viral expression vector is a lentiviral vector ~~HIV-1~~.

5. The method according to Claim 4 ~~1~~, wherein the neurotrophic composition is a fluid having a concentration of neurotrophin encoding lentiviral particles in the range from 10^{10} to 10^{15} particles per ml of neurotrophic composition.

6. The method according to Claim 5, wherein from 2.5 µl to 25 µl of the neurotrophic composition is delivered to each delivery site.

7. (Currently Amended) The method according to Claim 1, wherein the treated mammal is a human and the ~~transgene~~ expression vector encodes a human neurotrophin.

8. The method according to Claim 7, wherein the neurotrophin is human glial cell-derived neurotrophic factor (GDNF).

9. The method according to Claim 7, wherein the human is suffering from Parkinson's disease, and the disease is ameliorated by stimulation of growth of dopaminergic neurons.

10. The method according to Claim 9, wherein the disease is ameliorated by reversal of deficits in motor function associated with the Parkinson's disease.

11. The method according to Claim 7, wherein the human is suffering from Alzheimer's disease, and the disease is ameliorated by stimulation of growth of cholinergic neurons.

12. The method according to Claim 11, wherein the disease is ameliorated by improvement of cognitive function whose impairment was associated with Alzheimer's disease.

Please add the following new claims:

13. (New) The method according to Claim 1, wherein the neurotrophin is neurturin.

14. (New) The method according to Claim 1, wherein the neurotrophin is NGF.

15. (New) The method according to Claim 1, wherein the neurotrophine is NT-4/5.

16. (New) The method according to Claim 1, wherein the neurotrophin is persephin.

17. (New) The method according to Claim 1, wherein the expression vector is an adeno-associated vector.

18. (New) The method according to Claim 4, wherein the lentiviral expression vector is HIV-1.

19. (New) The method according to Claim 1, wherein the neurotrophin is expressed within 500 μm of a targeted cell.

20. (New) The method according to Claim 1, wherein each direct delivery site is no more than 10 mm from another direct delivery site.